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PTO/SB/17 (12-04)

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Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2005

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT **(*\$*) 500.00**

| Complete if Known | |
|----------------------|-----------------|
| Application Number | 09/874,371 |
| Filing Date | June 6, 2001 |
| First Named Inventor | Andreas LEUPOLZ |
| Examiner Name | T. Collins |
| Art Unit | 3643 |
| Attorney Docket No. | 101280.49983US |

METHOD OF PAYMENT (check all that apply)

Check Credit Card Money Order None Other (please identify): _____

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

| Application Type | FILING FEES | | SEARCH FEES | | EXAMINATION FEES | | Fees Paid (\$) |
|------------------|-------------|----------|-------------|----------|------------------|----------|----------------|
| | Fee (\$) | Fee (\$) | Fee (\$) | Fee (\$) | Fee (\$) | Fee (\$) | |
| Utility | 300 | 150 | 500 | 250 | 200 | 100 | |
| Design | 200 | 100 | 100 | 50 | 130 | 65 | |
| Plant | 200 | 100 | 300 | 150 | 160 | 80 | |
| Reissue | 300 | 150 | 500 | 250 | 600 | 300 | |
| Provisional | 200 | 100 | 0 | 0 | 0 | 0 | |

2. EXCESS CLAIM FEES

Fee Description

Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent **Fee (\$)** **Fee (\$)**
 Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent **Fee (\$)** **Fee (\$)**
 Multiple dependent claims **Fee (\$)** **Fee (\$)**

| Total Claims | Extra claims | Fees(\$) | Fee Paid (\$) | Multiple Dependence Claims | Fee(\$) | Fee Paid (\$) |
|--|--------------|----------|---------------|----------------------------|---------|---------------|
| -20 or HP | x | = | | | | |
| HP = highest number of total claims paid for, if greater than 20 | | | | | | |

| Indep. Claims | Extra claims | Fees(\$) | Fee Paid (\$) | Fee(\$) | Fee Paid (\$) |
|---------------|--------------|----------|---------------|---------|---------------|
| - 3 or HP | | | | | |

HP = highest number of total claims paid for, if greater than 3

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(d).

| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof | Fee (\$) | Fee Paid (\$) |
|--------------|--------------|--|----------|---------------|
| - 100 = | / 50 = | Round up to a whole number | x | = |

4. OTHER FEES

Non-English Specification, \$130 fee (no small entity discount)

Other **APPEAL BRIEF** **\$500.00**

SUBMITTED BY

| | | | |
|-------------------|------------------------------|---|--------------------------|
| Signature | <i>Vincent J. Sunderdick</i> | Registration No. (Attorney/Agent) 29,004 | Telephone (202) 624-2500 |
| Name (Print/Type) | Vincent J. Sunderdick | | Date December 17, 2004 |

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 09/874,371 Confirmation No. : 2725
First Named Inventor : Andreas LEUPOLZ
Filed : June 6, 2001
TC/A.U. : 3643
Examiner : Timothy Collins
Docket No. : 101280.49983US
Customer No. : 23911
Title : Arrangement for Improving The Thermal Comfort in Passenger Planes

APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

On October 22, 2004, Appellants appealed to the Board of Patent Appeals from the final rejection of claims 1-12 and 15-22. The following is Appellants' Appeal Brief submitted pursuant to 37 C.F.R. §1.192.

REAL PARTY IN INTEREST

Dornier GmbH LHG, D-88039 Friedrichshafen, FED REP, Germany

RELATED APPEALS AND INTERFERENCES

There are no known related cases which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal.

STATUS OF CLAIMS

The application contains claims 1-12 and 15-22 with claims 13-14 having been previously cancelled.

STATUS OF AMENDMENTS

Subsequent to the Final Patent Office Action of June 22, 2004 a Response which did not make any amendments to the claims was submitted on September 22, 2004. The Advisory Action of October 8, 2004 indicated that the response did not place the application in condition for allowance.

SUMMARY OF THE INVENTION

Appellant's invention, as defined by independent claims 1, 18 and 20 concerns an improved passenger compartment of an airplane wherein a coating is provided on the interior surface of a cabin in order to reflect heat (radiation) from a passenger. More particularly, the coating material which is applied to the interior surface of the airplane has a low thermal emission coefficient to reflect heat from the inside environment. This environment particularly includes the passenger, so that the heat from the passenger is reflected back to the passenger with the result that the coated surface does not emit radiation primarily as a function of its surface temperature.

Each of independent claims 1, 18 and 20 recite that the coating has a thermal emission coefficient no greater approximately 0.5 and that the effect of this coating is to improve radiation exchange with a passenger in the aircraft cabin when compared with an uncoated interior surface.

ISSUES

The issues to be decided by the Board of Appeals and Interferences is (1) whether claims 1-3, 15, 17, 18 and 20 have been properly rejected under 35 USC §102 as anticipated by or, in the alternative, under 35 USC §103 as obvious over U.S. Patent No. 6,391,400 to Russell et al.; (2) whether dependent claims 4-6 are properly rejected under 35 USC §103 as unpatentable over Russell and Allemand U.S. Patent No. 6,178,043; (3) whether claim 8 is properly rejected under 35 USC §103 over Russell and Coleman U.S. Patent No. 4,731,289; (4) whether claims 7, 16 and 21 are properly rejected over the combination of Russell and U.S. Patent No. 5,976,702; (5) whether claims 8 and 9 are properly rejected over the

combination of Russell and Allemand; and (6) whether claims 10-12 are properly rejected under 35 USC §103 over the combination of Russell and Rensch U.S. Patent No. 6,092,915.

GROUPING OF THE CLAIMS

Claims 1-17 do not stand or fall together.

ARGUMENTS

The reference to Russell '400 concerns a thermal control film or glazing with coated polymer sheets used as transparent heat reflective thermal control films. These sheets transmit visible radiation and provide high reflectance at one or more radiation wavelengths which are near infrared (heat reflective). Referring to the statement of the rejection of independent claims 1, 18 and 20, Russell is cited for disclosing a heat reflective coating with a low thermal emission coefficient of less than 0.5 referring to col. 2, lines 11-24 and particularly lines 20-24. This portion of Russell is cited by the Examiner for illustrating improved radiation exchange "at least for the reasons that is made of the same materials as the Applicant's and is coated in the same way." Additionally, col. 2, lines 5-12 of Russell have been cited for teaching that the glass is a single pane of glass or glazing with a thermal control film adhered to its face. From these disclosures, the Examiner concludes that it would have been obvious to have applied the film to the interior of the glass because the motivation would have been to place the film on the side which is the most effective so that it would have been provided for stopping emission and trapping heat.

Applicants respectfully refer to col. 6, lines 56-60 of Russell for an indication that there is a substrate with at least one face and a thermal control film on that face wherein the control film is used in vehicular glazing and allows the transmittance through the film of a majority of infrared radiation, incident upon the control film, in the 7 to 20 micron wavelength region that is emitted by interior materials in the enclosed space.

Appellants submit therefore that Russell has nothing to do with “stopping emission” and “trapping heat” whereas the presently claimed invention provides that radiation exchange with a passenger is improved. The radiation is reflected towards the passenger. This is one of the objects of the present invention.

Claims 1, 18 and 20 require that the low emission coating is located on the inner surface of a structure facing the passenger. In contrast, Russell has a “low E” coating applied to the outside surface of an inner glass panel of a double glazing. If, in theory, the thermal control film is used for a single substrate it must be applied so that it allows transmittance through the film of a majority of the infrared radiation. This is precisely the opposite of the presently claimed invention.

As a result, the Russell reference teaches subject matter which is likely to lead one skilled in the art away from the present invention as the radiation exchange between an inner glass panel and an outer glass panel in Russell is suspended. Applicants have discussed a coated double-glazing structure at page 3 the second paragraph of the present application. The invention is not addressed to insulating against heat loss. According to the present invention the thermal radiation, which is different from the thermal conduction, is reflected by the “low E” coating. Thermal radiation does not lead to heating up of interior air. Exhibit A attached to the Response of September 22, 2004 illustrates the double pane structure used in Russell whose purpose is to insulate against loss of heat to prevent radiation from the inside to the outside.

Each of the secondary references to Allemand et al. U.S. Patent No. 6,178,034, Coleman U.S. Patent No. 4,731,289, Rensch U.S. Patent No. 6,092,915 and Yoneda U.S. Patent No. 5,976,702 add nothing towards meeting the claim limitations which define independent claims 1, 18 and 20 particularly with regard to the features discussed above which are lacking in the primary reference to Russell. It is submitted that there is no teaching from these references which could obviously be combined with Russell to meet the claim limitations of independent claims 1, 18 and 20, as presently constructed.

Claims 2-12 and 16-17 depend from and contain all the limitations of

independent claim 1 with claims 2-4 specifying the coating and claims 5-6 specifying the thickness of the coating. Dependent claims 7-9 specify the application of the material to windows of the airplane and different materials which constitute the window whereas claims 10-12 specify the application of the coating to decorative foil. Claims 15-17 limit the application of the coating to certain portions of the aircraft and limit the interior surface of the aircraft. Each of these features with respect to the thickness, the coating and the material of the aircraft are separately patentable. Thus, claims 1-17 do not stand or fall together.

For these reasons, Applicants respectfully submit that the decision of the Examiner in finally rejecting claims 1-12 and 15-22 is erroneous and should be REVERSED.

APPENDIX

A copy of the claims on appeal is enclosed herewith.

CONCLUSION

This Appeal Brief is accompanied by a check in the amount of \$500.00 in payment of the required appeal fee. This amount is believed to be correct, however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 05-1323, Docket No.: 101280.49983US. A triplicate copy of this Appeal Brief is attached.

Respectfully submitted,

December 17, 2004



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VJS:lvb:ddd
Enclosure

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